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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,941	09/30/2003	Petrus J. L. van Beek	SLA1425 (7146.0168)	7868

55648 7590 11/19/2008

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EXAMINER	
CEHIC, KENAN	
ART UNIT	PAPER NUMBER
2416	
MAIL DATE	DELIVERY MODE
11/19/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,941	VAN BEEK, PETRUS J. L.	
	Examiner	Art Unit	
	KENAN CEHIC	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-96* is/are pending in the application.

4a) Of the above claim(s) *46-96* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 23-33 objected to because of the following informalities:

For claim 23, it appears that "a receiver" in line 10 refers back to "a receiver " in line 3 (one receiver receives receives both first and second plurality of packets). If this is true, it is suggested that the second occurrence be replaced with --said receiver--.

Dependent claims are objected based on the above grounds.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 23-34, 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 23, the limitation "comprising a plurality of said first plurality of packets" introduces ambiguity into the claim and it is not exactly clear what is claimed. It appears to the examiner that the language can be interpreted two ways : the data comprises the plurality of said first plurality of packets or the second plurality of packets comprises the first plurality of packets. If the latter is what the applicant is trying to claim, this creates a contradiction with the limitation "said second plurality of packets is less than said first plurality of packets". If the second plurality comprises the first, then the second can not

be less than the first. The examiner will view the claim in the former interpretation, nonetheless definitive language is needed to clear the ambiguity.

For claim 26 and 38, the limitation "IEEE 802.11 compliant" is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 23, 24, 26, 34, 36, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 2007/0263657) in view of Fillebrown et al (US 2004/0204041)

For claim 23, Sugar discloses a method for transmitting data (see section 0005 "Each STA is attempting to upload…or download a file from as server via the WLAN AP 100") comprising: defining a first average rate (see section 0047 "Throughput per slow user....50 kpbs" and section 0036 "control the average throughput…network throughput control process..") to transmit a first plurality of packets (see section 0003-5

"transmitting an MSDU…there are ten 54 Mbps STAs…"; section 0024 "different packet lengths for different user data rates" ; section 0039 " transmit packets"; section 0044 " fixed-duration packet technique to the example introduced above in conjuction with FIG. 1") of said data (see claim 1 "first set of time average data rates") for presentation at a receiver (see fig 1; 120);

(b) defining a second average rate (see section 0047 "Throughput per fast user....2.7 Mpbs" and section 0036 "control the average throughput…network throughput control process..") to transmit a second plurality of packets (see section 0003-5 "transmitting an MSDU…there are ten 1 Mbps STAs…"; section 0024 "different packet lengths for different user data rates" ; section 0039 " transmit packets"; section 0044 " fixed-duration packet technique to the example introduced above in conjuction with FIG. 1") of said data (see section 0005 "Each STA is attempting to upload…or download a file from as server via the WLAN AP 100") comprising a plurality of said first plurality of packets (see section 0003-5 "transmitting an MSDU…there are ten 54 Mbps STAs…"; section 0024 "different packet lengths for different user data rates" ; section 0039 " transmit packets"; section 0044 " fixed-duration packet technique to the example introduced above in conjuction with FIG. 1"), wherein said second plurality of packets is less than said first plurality of packets (see section 0005 "Each STA is attempting to upload…or download a file from as server via the WLAN AP 100" and section 0044 "packet length for the fast …users is set to the MSDU length of 2 KB….maximum packet length for the 1 Mbps is…38 bytes"), wherein said second average rate is greater than said first average rate (see section 0044-49 "Throughput per slow user…50kbps…per fast user…2.7

Mbps")

(c) transmitting said second plurality of packets (see section 0003-5 "transmitting an MSDU…there are ten 54 Mbps STAs…"; section 0024 "different packet lengths for different user data rates" ; section 0039 " transmit packets"; section 0044 " fixed-duration packet technique to the example introduced above in conjuction with FIG. 1") from a transmitter (see fig 1; 110 or 120) to a receiver (see fig 1; 110 or 120) over a wireless interconnection (see fig 1; 120, 110).

For claim 34, Sugar discloses A method of transmitting data data (see section 0005 "Each STA is attempting to upload…or download a file from as server via the WLAN AP 100") comprising:

(a) defining a transmission rate (see section 0047 "Throughput per fast user....2.7 Mpbs" and section 0036 "control the average throughput…network throughput control process..") to transmit a plurality of packets of said data (see section 0003-5 "transmitting an MSDU…there are ten 1 Mbps STAs…"; section 0024 "different packet lengths for different user data rates" ; section 0039 " transmit packets"; section 0044 " fixed-duration packet technique to the example introduced above in conjuction with FIG. 1") wherein said transmission rate is greater than the average rate for transmitting said data (see section 0044-49 "Throughput per slow user…50kbps…per fast user…2.7 Mbps…Average throughput…1.375Mbps…") to a receiver (see fig 1; 110 or 120); (b) transmitting said plurality of packets of said data (see section 0003-5 "transmitting an MSDU…there are ten 1 Mbps STAs…"; section 0024 "different packet lengths for different user data rates" ; section 0039 " transmit packets"; section 0044 " fixed-duration

packet technique to the example introduced above in conjuction with FIG. 1") over a wireless interconnection (see fig 1; 120, 110) wherein all packets contain at least one of data see section 0005 "Each STA is attempting to upload…or download a file from as server via the WLAN AP 100").

For claim 24 and 36, Sugar discloses wherein said second plurality of packets are provided to said transmitter at the maximum rate (see section 0044 "54 Mbps").

For claim 26 and 38, Sugar discloses said wireless interconnection is IEEE 802.11 compliant (see section 0053 "802.11"; section 0060 "IEEE 802.11").

Sugar does not explicitly disclose:

For claim 23, presentation at the receiver.

For claim 34, video data.

Fillebrown from the same field of endeavor discloses:

For claim 23, Fillebrown discloses presentation at the receiver (see fig 2 and 6a; section 0067 "Video packet received by the wireless tablet…carry video display information…sends to a display"; section 0075 "receives video …via wireless transmission…displayable video…displays the video information" ;section 0077, 0084, 0099); .

For claim 34, Fillebrown discloses video data (see fig 2 and 6a; section 0067 "Video packet received by the wireless tablet…carry video display information…sends to a display"; section 0075 "receives video …via wireless transmission…displayable video…displays the video information" ;section 0077, 0084, 0099).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Sugar by using the features, as taught by Fillebrown, in order to provide a personal wireless network is provided that is inexpensive, scaleable, and flexible (see FIllebrown sections 0017-21). Further it would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Sugar by using the features, as taught by Fillebrown, in order to provide solutions are needed to contend with the foregoing challenges in maintaining stability of a wireless network with multiple data rate users and to improve throughput for wireless devices that are capable of high transmission rates (see Sugar section 0021-23).

4. Claim 25, 27, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 2007/0263657) in view of Fillebrown et al (US 2004/0204041) as applied to claim 23 above, further in view of Hao (US 2005/0105469)

For claim 25,27, 37, Sugar and Fillebrown discloses the claimed invention as described above.

Sugar and Fillebrown are silent about:

For claim 25 and 37, wherein said second plurality of packets are provided as a burst of packets with at least two packets transmitted in a back-to-back fashion without other packets between them.

For claim 27, all packets of said second plurality of packets contain at least one of audio data and video data.

Hao from the same or similar field of endeavor discloses a communication network with the following features:

For claim 25 and 37, Hao discloses wherein said second plurality of packets are provided as a burst of packets (see section 0006 "burst…data packets") with at least two packets transmitted in a back-to-back fashion without other packets between them (see section 0006 "data packets that are received consecutively" and section 0030 "consecutive data packets").

For claim 27, Hao discloses all packets of said second plurality of packets contain at least one of video data (see section 0075 "receives video via a wireless transmission…packetized video"; section 0077 "receives video and audio").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Sugar and Fillebrown by using the features, as taught by Hao, in order to provide a providing a level of assurance to the network that the network's Quality of Service (QoS) can be satisfied, such as being able to deliver time-sensitive information, and preventing of dropping of packets during transmission (see Hao sections 0005-10)

5. Claim 26 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 2007/0263657) in view of Fillebrown et al (US 2004/0204041) as applied to claim 23 above, further in view of Varma et al (US 6,275, 497)

For claim 26, and 39 Sugar and Fillebrown discloses the claimed invention as described above.

Sugar and Fillebrown are silent about:

For claim 26, and 39 wherein said second plurality of packets is transmitted in a duration less than 1 second.

Varma from the same or similar field of endeavor discloses a communication network with the following features:

For claim 26, and 39 Varma discloses wherein said second plurality of packets is transmitted in a duration less than 1 second (see col 13 line 13-22 "Downstream file transfers typically require less that 1 second to complete").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Sugar and Fillebrown by using the features, as taught by Varma , in order to provide beneficial aspects of both contention and polling protocols by employing dynamic allocation of upstream channels to move users of a network between diverse channels utilizing different protocols selected to maximize data transfer based on the instantaneous transmission status of the user and/or a user's detected or requested payload data transfer needs (see Varma col 2).

6. Claim 29-31, 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 2007/0263657) in view of Fillebrown et al (US 2004/0204041) as applied to claim 23 above, further in view of Na et al (US 2004/0071096)

For claim 29-31, 40-42, Sugar and Fillebrown discloses the claimed invention as described above.

Sugar and Fillebrown are silent about:

For claim 29 and 40, wherein said transmitting is by an APPLICATION LAYER.

For claim 30 and 41, wherein said transmitting is by a transport layer.

For claim 31 and 42, wherein said transmitting is by a network layer.

Na from the same or similar field of endeavor discloses a communication network with the following features:

For claim 29 and 40, Na discloses wherein said transmitting is by an APPLICATION LAYER (see section 0032-33 "FTP server…mobile node is receiving node").

For claim 30 and 41, Na discloses wherein said transmitting is by a transport layer (see section 0012, 0034-35 "TCP") .

For claim 31 and 42, wherein said transmitting is by a network layer (see section 0034-35 "TCP/IP…Internet protocol").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Sugar and Fillebrown by using the features, as taught by Na, in order to provide a method and apparatus for improving the efficiency of transmission in a system for transmitting packet data having a compressed header. (see Na sections 0006-13).

7. Claim 32, and 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 2007/0263657) in view of Fillebrown et al (US 2004/0204041) as applied to claim 23 above, further in view of Vega-Garcia et al (US 2003/016630)

For claim 32, and 43 Sugar and Fillebrown discloses the claimed invention as described above.

Sugar and Fillebrown are silent about:

For claim 32, and 43 wherein the arrival times of a plurality of said second plurality of packets at the receiver are used to estimate the available bandwidth of said wireless interconnection.

Vega-Garcia from the same or similar field of endeavor discloses a communication network with the following features:

For claim 32, and 43, Vega-Garcia discloses wherein the arrival times of a plurality of said second plurality of packets at the receiver are used to estimate the available bandwidth (see section 0019 "Each of the devices..use the difference in arrival times…control packets…approximate the bandwidth available") of said wireless interconnection (see section 0021, 0023 "wireless media").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Sugar and Fillebrown by using the features, as taught by Vega-Garcia, in order to provide a method and system for approximating the available bandwidth over a network without significantly increasing network traffic (see Vega-Garcia sections 0004-15)

8. Claim 33, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 2007/0263657) in view of Fillebrown et al (US 2004/0204041) as applied to claim 23 above, further in view of Farris et al (US 6,167,253)

For claim 33, and 45, Sugar and Fillebrown discloses the claimed invention as described above.

For claim 33, and 45, Sugar further discloses the steps b and c (see rejection above)

Sugar and Fillebrown are silent about:

For claim 33 and 45, perform a plurality of times over a time period.

Farris from the same or similar field of endeavor discloses a communication network with the following features:

For claim 33 and 45, Farris discloses perform a plurality of times over a time period (see col 44 lines 29-43 "mobile user...receive specific information...on a predetermined time basis...every 15 minutes").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Sugar and Fillebrown by using the features, as taught by Farris, in order to provide efficiently allocating sufficient resources between the interactive relationship of the optional information provider and the portable audio program listener (see Farris col 4)

9. Claim 34 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 2007/0263657) in view of Fillebrown et al (US 2004/0204041) as applied to claim 23 above, further in view of Falco et al (US 6,700,869)

For claim 34, and 44 Sugar and Fillebrown discloses the claimed invention as described above.

Sugar and Fillebrown silent about:

For claim 34 and 44, said first average rate is equal to the bit rate of the data source.

Falco from the same or similar field of endeavor discloses a communication network with the following features:

For claim 34 and 44, Falco discloses said first average rate is equal to the bit rate of the data source (see col 3 line 5-20 "average arrival rate…equal to the average output rate").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Sugar and Fillebrown by using the features, as taught by Falco, in order to provide managing admission priority of data messages to reduce buffer memory requirements or to enhance throughput performance (see Falco col 1-2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/
Examiner, Art Unit 2416

/Kwang B. Yao/

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